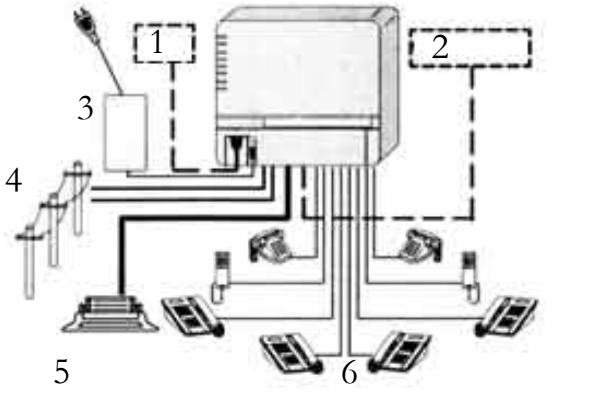
LINK 2800 CLIP
TELEPHONE SWITCHBOARD

Supporting Caller ID
(Calling Line Identification Presentation)

USER MANUAL

Dear customer,

Thank you for purchasing the LINKCOM 2800 CLIP switchboard (PBX). This product is a truly complete system designed for your office or home requirements.
LINKCOM 2800 CLIP manages 2 outside public lines and 8 extensions: these ones can be connected to standard or cordless analogue telephones, to a fax-machine, as well to an answering machine. Dialing can be done both in tone and pulse mode.
Up to 2 outside calls, 2 internal calls and 1 door phone communications can be managed simultaneously by the LINKCOM 2800 CLIP.
The system is equipped with music on-hold and with an interface towards a normalized 5-wires door phone/door-lock release with buzzer, and a low voltage relay control (to control, through a remote control switch and a safety insulator, the switch of a simple household device, such as a TV, lighting, etc.).
A further enhancement has been achieved by equipping the system with a dock, (constituted by an add-on board), enabling a printout of the telephone traffic information (through a suitable cable) as well the implementation of a wake-up service.



1) Relay/Gate-lock release
2) Door phone/Door-lock release
3) Power Supply adapter
4) Telephone network
5) Printer
6) Standard, multifunction, Cordless telephones, Answering machines, Fax

DECLARATION OF CONFORMITY

The switchboard (PBX) LINKCOM 2800 CLIP complies with EEC Directive 05/1999 of the European Parliament and the Council dated March 9th, 1999 , concerning Radio Equipment and Telecommunications Terminal Equipment (R&TTE) and the relevant recognition of their conformity.
LINKCOM 2800 CLIP meets likewise the EMC Norms EN50022 – EN 55024, as well the Safety norms EN 41003 – EN 60950.
The Conformity to the above mentioned requirements is stated by the CE Marking shown on the product itself.

INTENDED USE of LINKCOM 2800 CLIP

This product is designed to operate in connection to the Analogue Telecommunication Networks (PSTN Network).

LIST OF SERVICES

PRIMARY SERVICES
Internal call and paging
General or selective access of the external line
Outside line immediate access when lifting the handset
Outside line on-hold mode with music or tones
Outside line recall and transfer to a free extension
Answer to a second incoming call, when engaged on the other external line
Line access during an outside call

ADDITIONAL SERVICES
Booking
Indusion
Access to Post-Dialling services
Outside line notification to busy extension
Do not disturb
Call pick-up for outside calls
Internal call transfer
Night Service
Call Barring
Call Barring override by password
Abbreviated dialling
Outside calls activation or partial disabling
Emergency numbers

CLIP SERVICE (Calling Line Identification Presentation)

SPECIAL SERVICES
Room Monitor
Hot Line with programmable voice message
Night Service with programmable answering message and FAX-SWITCH
Direct Inward Selection Access (DISA) and FAX-SWITCH with programmable voice help
Call capture on FAX or Answering machine
Answering machine message notification through an outside/door phone call
Door phone/Door-lock release and remote controlled relay device interface

PRIVATE LINE COMMUNICATIONS MANAGEMENT
Unanswered calls forwarding to an outside number
Transfer of calls to a private number
Remote access of the second outside line and direct outward selection access (**DOSA**)
Differentiated line access for public/private line

OTHER SERVICES
Outgoing/incoming calls detailed report printout
Wake-up Service

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THE CLIP SERVICE, SUPPLIED BY THE LOCAL OPERATOR, ENABLES USERS EQUIPPED WITH A SUITABLE TERMINAL TO DISPLAY THE CALLER IDENTIFICATION, (I.E. THE CALLING NUMBER).THE LINKCOM 2800 CLIP PBX ALLOWS THE USE OF THESE TERMINALS ON ALL EXTENSIONS : THE DISPLAY OF THE INTERNAL AND EXTERNAL CALLER IDENTIFICATION IS SET BY DEFAULT. HOWEVER INDIVIDUAL TELEPHONES CAN BE DULY SELECTED BY PROGRAMMING THE EXTENSION 41, DIALLING : 98 1234 56 D R ACCORDING TO THE FOLLOWING TABLE : 18
REMARK : 18
• *TO DISABLE A SINGLE EXTENSION, DISABLE ALL EXTENSIONS FIRST, AND THEN ENABLE THE REMAINING ONES* 18
• *SEVERAL TELEPHONES CAN BE SEQUENTIALLY PROGRAMMED, FOR INSTANCE 98 1234 56 12345678 R.* 18
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INSTALLATION INDEX

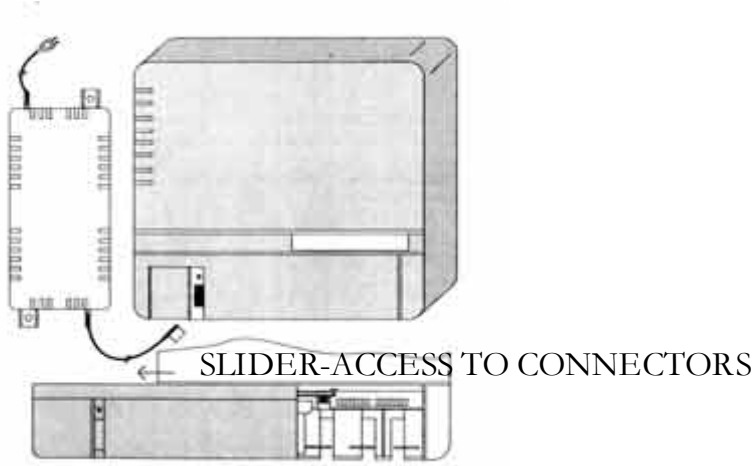
We recommend using a qualified installation company for installation and commissioning, and to comply strictly with the following indications.

PACKAGE CONTENT

- LINKCOM 2800 CLIP switchboard (PBX)
- Power supply
- 4 x 5 mm wall screw anchors
- 2 modular cables plug - plug
- 1 x 2 poles cable with plug (door-phone)
- Printer cable (25pins / RS232)
- User manual and Guarantee.

GENERAL

The switchboard and the power supply must be wall-mounted close to network line-accesses and electrical network connection, using the screw anchors enclosed.
Furthermore, care should be taken not to install the system near electromagnetic sources (photocopiers, transmitter antennas, electrical cabinets, transformers,…).
The enclosed template sheet can be used to place properly the anchor screws.
Ricordarsi di includere la Dima

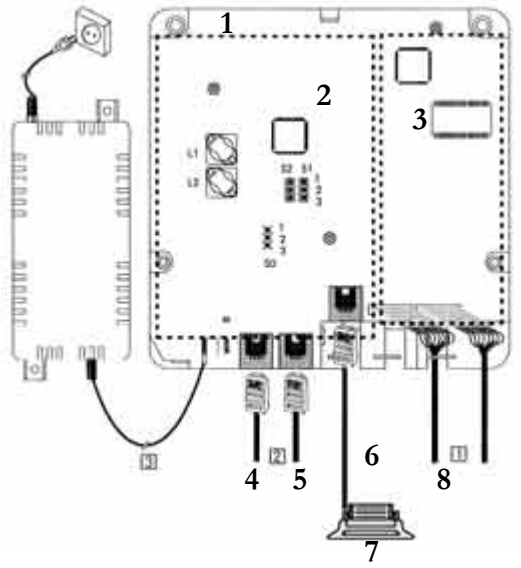


SWITCHBOARD COMPOSITION (Pict. 1)

The switchboard, when fully equipped, is constituted of a motherboard, with two add-on boards installed, for the following functions:

- Mainboard, for the primary functions with the outside lines, terminals and power supply connections. It contains 2 jumpers (S1, S2) for specific configuration operations.
- Door phone and relay control add-on board: contains a jumper (S0) for a specific configuration operation and 2 potentiometers to calibrate transmission and receiving voice levels.
- Add-on board: to provide the clock function when printing the telephone traffic.

Fig. 1



1 Mainboard
2 Door phone interface add-on board
3 Clock for traffic add-on board
to outside lines (through line protections):
4 Line 2
5 Line 1
6 Special cable for printer 25 pins RS232
7 Printer (optional)
8 Extensions 5-8 Extensions 1-4 to internal telephone sockets

JUMPERS

Jumper S1: refers to the system password.
The jumper default position (2-3) is the normal operation mode. Position 1-2 restores default passwords (i.e. those existing at first installation and pre-set at the factory), as described in "Troubleshooting".
Jumper S2: refers to the second outside line.
The default position is 1-2. This position enables the use of both system outside lines. Position 2-3 is recommended to customers with a single outside line (waiting for a second line, requires a line with 8 devices). In this mode, the system adapts to this type of equipment.
Jumper S0: is located on the door phone interface Add-on board.
It enables to set the electric contact on the optional interface as an electric switch or gate-lock release. The default position (1-2) is in the gate-lock release mode.

Eventual jumpers change from default position requires opening the switchboard case, which must be strictly done only after disconnecting power supply and outside lines.

CONNECTIONS

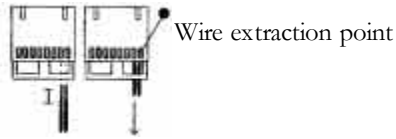
Please follow this order when connecting the different equipment:
- internal lines (Section 1)
- external lines 1 and 2 (Section 2)
- power supply (Section 3)

Internal lines

Each device must be connected to the system through a telephone pair, with 0.6 mm diameter wires: wires at cable end must be stripped and pressure-set in a self-locking mini-connector.
Use of a multi-pair telephone cable is not recommended for distances above 20 m.
The mainboard has 2 mini-connectors, one for the first 4 extensions (numbers 41 to 44), and one for the 4 additional extensions (numbers 45 to 48).

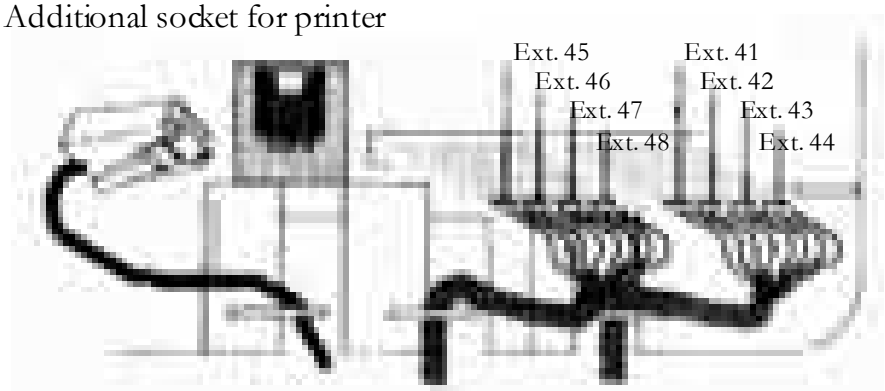
Use of mini-connectors

MINI-CONNECTORS FRONT SECTION



In order to release the wires from the mini-connector, insert a pin on the opposite side of the conductors, on the metal part above the connector. Connectors are inserted in the system with their front section facing down. Cables must be placed behind the holding screens housed in the plastic at the bottom of the connector

Additional socket for printer



Extensions 41 and 45 can work in case of power failure (emergency condition) since they are directly connected to the two outside lines (41 with line 1, 45 with line 2).
We recommend taking this into consideration when allocating these devices to users.

External lines

Outside lines are connected to the switchboard through cables using plug - plug connectors.

The switchboard is equipped with protections against overvoltage originating from the telephone lines and occurring during normal operation. However, for a more suitable protection against shocks caused by atmospheric phenomena, we recommend the installation of suitable protection devices available on the market.

Line 2 Line 1
To outside lines protections

Power supply

The switchboard is equipped with an external power adapter, with a cable ending with a 4-pole connector, and a cable for the connection to a 230V/50Hz socket (see Pict. 1). Power supply is indicated by a green LED.
(fig.)

The power supply plug must be easy to access, since it can be used as a cut-off in case of need.

CONNECTION with "NT1 PLUS" – configurations

In NT1 PLUS termination, the following configuration parameters are normally set as follows:

- TEI attribution: automatic (Multi-number access)
- Incoming calls management: diffused (on both analogue lines)
- Signal notification mode: Pulse + Tone
- Calls on hold: type 1 activated (both lines busy)
- Wait for plug change: enabled

When connected with LINKCOM 2800 CLIP, the a.m. NT1 PLUS configuration parameters must be configured according to the following table:

TEI attribution	**Automatic**, i.e. Multi-number configuration (in Single-number configuration, with a fixed TEI some important LINKCOM 2800 CLIP features, such as the DISA/FAX_Switch service, assigned to one of the two lines, would be lost)
Incoming calls management	In case of Multi-number access, the **telephone numbers** associated with the two lines **must be configured**. In case of Single-number access: **alternatively distributed**
Signal notification mode	**Tone and R key only**
Calls on hold	**Better when disabled**, in order to avoid overlapping between the switchboard and public network tones.
Wait for plug change	**Disabled**

CORRECT INSTALLATION TEST PROCEDURE

Test without connection to the power supply

- Lift handset from device 41. The dialing tone of line 1 is heard.
- Lift handset from device 45. The dialing tone of line 2 (when connected) is heard.

Test with connection to the power supply

- Connect the power supply cable: the green LED lights up permanently.
- Lift handset from device 41, check for continuous tone and dial 40 (paging): all connected phones must ring.
- Lift handset from a ringing telephone: check that the two telephones are connected.
- Hang-up and repeat with all the telephones connected.
- Dial 21 (outside line 1 accessed) from device 41: check for dialling tone
- Dial an outside telephone number and check proper call execution. Ask the outside counterpart to call the telephone number corresponding to line 1 and check that all free telephones ring.
- Lift handset from a telephone: and check that the connection is established.
- Dial 22 (outside line 2 accessed) from a telephone: check for dialing tone
- Dial an outside telephone number and check proper call execution. Ask the counterpart to call the telephone number corresponding to line 2 and check that all free telephones are ringing.
- Lift handset from a telephone: and check that the connection is established.

OPERATION MODE

LANGUAGE

Flemish or French languages can be set to operate the LINKCOM 2800 CLIP for the French speaking countries market. The choice of the language can be made through the extension 41, with the following procedure:
98 1234 84 0 , then press the **R key,** for Flemish
98 1234 84 1 , then press the **R key,** for French
The chosen language setting is confirmed by the relevant message: "Service activated".
The system is equipped with Flemish language by default.
In case of any change between the two languages, the supported messages performed for DISA, HOT LINE & NIGHT SERVICE will not be available, accordingly. For any language setting a new message-recording is needed.

GENERAL

The switchboard is delivered with the following **default configuration**:

- access to both outside lines and dialing without restrictions enabled for all extensions
- ring and receipt of incoming calls enabled for all extensions
- tone dialing mode on outside lines
- Flemish language

Extensions are identified with two-digits numbers, from 41 to 48.
In case of power supply fault, ext. 41 is directly connected with the outside line defined as line 1; ext.45 is directly connected with the other line, defined as line 2.

Furthermore the ext. 41 can be used to change switchboard configuration. In order to check identification, lift handset from ext. 41 and, after the continuous tone, please dial the number **98 1234 99 R** (when the R key is not available, press briefly the telephone hook): a sequence of short tones is heard. If the extension is not n.41, an error voice message is heard.
The above code, in addition to identifying ext. 41, confirms the basic configuration, too.

The switchboard primary services can now be used, namely:

- internal call (between two extensions)
- outside call (access to an outside line)
- transfer of an outside call to another extension.

PRIMARY SERVICES

When the handset is lifted, the number must be dialled within 10 seconds; then, a congestion line tone is heard. Hang-up or press the R key (if available on the phone) before starting again.

1 – Internal call and paging

Lift the handset, after hearing the continuous tone dial the relevant extension number (**41** to **48**) or the paging code (**40**). In this last case, all extensions ring, and the first to answer is connected to the caller.

If the extension called is busy, the call can be booked or the caller can be included in its conversation (if enabled): these cases are described in the paragraph "Additional Services" below.

The maximum number of simultaneous internal conversations is 2: the additional extensions attempting to dial receive a congestion line tone.

2 – Outside call

2.1 – General access (0)

Lift the handset, dial **0** after the continuous tone and, upon receiving the dialling tone, dial the number required.

Should the dialling tone fail to be heard after dialing **0**, one of the two outside lines could be disconnected: check proper installation or try again.

If both outside lines are busy, a voice message informing of the occurrence is heard: in this case the first available line can be booked, as described in the paragraph "Additional Services" below.

If the dialling tone does not disappear when the number is dialled, it may be due to the local exchange not accepting a tone dialling, and therefore the dialling mode must be switched through a specific programming (see chapter "System Programming", **item 6** "Programming Outside Lines" code 6L1).

Remark: dialling 0 alternatively accesses both lines at each attempt.

2.2 – Selective access (21, 22)

Line 1 or line 2 can be deliberately accessed. In this case, after lifting the handset, dial **21** after the continuous tone to access line 1 or dial **22** to access line 2.

The selective access also allows inclusion in the conversation in progress (if enabled) in case the outside line is busy: this case is described in the paragraph "Additional Services" below.

2.3 – Immediate access when lifting the handset

Finally, the outside line required can be immediately accessed upon lifting the handset (without the need to dial any code), as when the telephone is directly connected to it, through a suitable programming (see chapter "System Programming", **item 3** "Programming Extensions" codes 4d* or 4d#).

This operating mode is useful when most calls are directed outside; placing an internal call is, however, possible by pushing the **R** key (if available) after lifting the handset, and dialling the extension required (41 … 48) after the continuous tone.

WARNING… If you are too fast *(when lifting/hanging-up the handset).*

- *After hanging-up on an outside call, the outside line is not available for approximately 3 seconds but is available for eventual incoming calls. Accessing the line before this period is elapsed will produce a busy tone.*
- *If the interval between hanging-up on an outside call is followed too closely by a lift of the handset of the same telephone, the switchboard considers the hanging-up as a request to place the line on hold (equivalent to a calibrated opening obtained by pushing the* R *key), and, therefore, the call is again available to the telephone as an unanswered call on hold.*

3 – Transfer of an outside call

Transferring a call involves the following steps:

- placing the outside line on hold
- calling the telephone to which the outside line is to be transferred
- actually transferring the call.

3.1 – Placing the outside line on hold (R or 2)

The placement of an outside line on hold can be made, in general, at any time during the conversation.

The placement on hold is activated in different ways according to the availability of the **R** key on your telephone.

- ***Telephones equipped with the R key***: press the **R** key to place the outside line on hold (press again the **R** key immediately afterwards to restore the connection).
- ***Pulse telephones without R key***: dial **2** to place the outside line on hold (dial **72** immediately afterwards to restore the connection). In this case, wait at least 8 seconds after dialling the last digit.

Remark: if, after placing an outside line on hold, the handset is hung-up without transferring the call, the telephone rings after 4-5 seconds, with a special ring and the line on hold is again available. When the handset is lifted, the conversation with the party on hold can be retrieved.

If no answer is given to an on-hold call ring within 3 minutes, the line is released.

The remote party on-hold hears the programmed on-hold tone (see chapter "System Programming", **item** "On-hold tone (music/tune)" code 63x or "On-hold music (play/record)" code 82x).

3.2. – Calling the terminal to which the outside line is to be transferred

After placing the call on hold, an extension can be **dialled**:

- **if the** called **extension** answers, a conversation can be engaged while the outside line is on-hold; press the **R** key to restore the connection with the outside line or briefly push the telephone hook.
- **if the** called **extension fails to** answer **or is busy**, press the **R** key: the continuous tone is heard; press the **R** key again to restore the connection with the outside line, or dial the number of another extension.

If the conversation with the internal extension lasts over 25 seconds, a warning tone overlaps the conversation, to remind an outside line is on-hold. This tone can be disabled through an appropriate programming (see chapter "System Programming", **item ?** *"Disabling tones during the conversation").*

3.3. – Actual transfer

During a conversation: if the telephone answers,notify the transfer and **hang-up** to immediately transfer the call.

Remark: During the conversation the called extension can decide to take the call on hold by pressing the ***R*** *key.*

When calling: **hang up** if the telephone fails to answer, or deliberately before it answers. This telephone will ring for 25 seconds waiting for a reply, after that, all the telephone extension whose ringers are enabled, shall ring.
Remark: a call can be transferred to any telephone , regardless of any eventual access limitations to outside lines. A call cannot be transferred to a busy telephone.

3.4. – Special cases

Answering a second incoming call during a conversation on the outside line
When engaged in a conversation on an outside line, an incoming call may be received on the other line (indicated by a special warning tone overlapping the conversation). The following options are available:
- ***Immediately transfer the conversation in progress:*** place the first call on hold (by pressing the **R** key or dialing **2**) and transfer it to a free telephone, then hang-up and wait for the telephone ring to answer the second call, or
- ***Immediately answer the second call:*** place the first call on hold (by pressing the **R** key or dialing **2**) and dial **5** after the continuous tone, the connection with the second call is now established. At this stage, the connection with the second outside party is established and the following options are available:

a) Transfer the second caller to a free telephone as described above, or:
b) Restore the connection with the first outside caller: place the second party on hold (by pressing the **R** key or dialing **2**) and dial **72** after the continuous tone. The connection with the first caller is now restored.
The process of alternatively bouncing between the two lines can be repeated by placing the call on hold (by pressing the **R** key or dialing **2**) and dialing **72**.
The line engaged in the conversation can be transferred at any time as described above.
Remark: If the conversation with one of the two parties lasts over 25 seconds, a warning tone overlaps the conversation, to remind that an outside line is on hold. This tone can be disabled through an appropriate programming (see chapter "System Programming", item ?"Disabling tones during the conversation").

Use of a line during an outside conversation
During a conversation on an outside line, the second outside line can be accessed without closing the conversation in progress, for instance, for consulting purposes. To do so, place the first call on hold (by pressing the **R** key or dialing **2**) and dial **0** after the continuous tone to access the second outside line if available. The number of the new party to be called can now be dialled and proceed as described above to switch between the two lines.

4 – When one extension or an outside line is busy:

4.1 – Booking (9)

When the extension called is busy, or when the outside line is not available, the line can be automatically booked.
Dial **9** when hearing the line busy tone and hang-up.
When the telephone or the outside line is free, the telephone from which the booking was originated is automatically called; answer must be given within 10 seconds, otherwise the booking is cancelled. If the booking telephone is busy, the booking call shall occur automatically as soon as it is free.
When lifting the handset of the booking telephone, the number of the booked telephone or the outside line access code is automatically dialled and the internal call or outside line tone is heard (after which the number of the outside party can be dialled).
Each telephone can make only one automatic booking.

4.2 – Inclusion (8)

When the extension you are calling is engaged in a call with another telephone or an outside party (except for door phone conversations), you can join in the conversation by dialling **8**. A tone indicates to the three parties that the inclusion has occurred.
When the inclusion is activated on an outside call, when one of the telephones hangs up, the conversation continues between the remaining parties.
When the inclusion is activated on a conversation between two extension, when the party requesting the inclusion hangs up, the conversation continues between the original parties. When one of the original parties hangs up, the connection is cut.

Remark: this function can be activated on an outgoing outside call only after the outside line is accessed by dialing 21 or 22.

This function must be programmed for the telephone requesting the inclusion (see chapter "System Programming", item ?"Programming terminals" code 4d0).

5 – During an outside call

5.1 – Post-dialling

This function is necessary, for instance, when calling an automatic operator. Access to this service is different according to whether a tone or pulse telephone is used:

- Tone: dialling is direct.
- Pulse: dial 2 then 72 when the continuous tone is heard; then dial the number required.

Remark: this procedure can be used if at least 8 seconds have elapsed from the last outside digit dialling.

6 – Managing incoming outside calls at best:

When an outside call reaches one of the PBX lines, all free telephones whose ringer is enabled, ring. Telephones eventually busy receive a warning tone until the call is answered.
Remark: This tone can be disabled by programming (see chapter "System Programming", item ?"Disabling tones during the conversation").

To answer an internal or outside call, just lift the handset. Ringer of each telephone can be disabled only for incoming outside calls, and excluding telephone 41.

6.1 – Do not disturb

Each telephone can activate or disactive the ringer only for outside calls. Ringer ON or OFF function is made after one telephone handset has been lifted, by dialling a two-digit code out of the following table, followed by the R key.
See also the chapter relevant to the door phone.

80 R	Ringer OFF for outside calls
81 R	Ringer ON line 1
82 R	Ringer ON line 2
83 R	Ringer ON lines 1 and 2
89 R	**Back to ringer ON for all calls**

If the R key is not available on the telephone, its action can be simulated by operating rapidly on the telephone hook.
REMARK: The above mentioned disabling cannot be done in combination with the Night Service .

6.2 – Terminal call pick-up for outside calls (5)

Should the ringer of your telephone be disabled, an outside call can be answered, by lifting the handset and dialling **5** after the continuous tone; the connection with the outside line is established.

6.3 - Immediate call transfer (24d R):

All internal calls to your telephone can be transferred to another telephone .
Activation. To activate the transfer to telephone 4d (41…48), lift the handset and dial **24d** (d=1…8) followed by **R**. a voice message confirms the transfer of calls. When a transfer is activated, the continuous tone heard when lifting the handset, is periodically interrupted.
Check. To check that the transfer is activated, dial **240** followed by **R**.
Deactivation. To disable the transfer dial **88** followed by **R**.
Remark: if you want to enable transfer also for outside calls, the DISA/Direct Selection must be programmed and activated (see below in the "Special Services" paragraph).

6.4 - Night Service

This service enables the ringer for incoming calls from each outside line on each extension. When the service is activated, only the telephones programmed for Night Service ring when an outside call is received, and this ringer setting works regardless of the eventual activation of the "Do Not Disturb" service made in day mode.
Programming and Activation. To activate the Night Service, after programming it on the telephones enabled for this service (see chapter "System Programming", item ?"Programming Terminals", codes 4d5 for outside line 1 and 4d6 for outside line 2), dial code **901** followed by **R** from any extension.
Disactivation. To disable the service, *dial* code **900** followed by **R** from any telephone.
Remark: During Night Service, an automatic answering service can be activated on incoming calls with a user-recorded message (see "Night Service Answering Message" service).

7 - Managing outgoing outside calls at best

Outgoing calls can be checked, by disabling long distance or specific network services dialling and, furthermore, use for the most frequent calls, a table of 40 abbreviated dialing codes (called "shortcuts numbers").

Furthermore, "Clock interface" described below, allows a printout with the details of each outgoing call.

7.1 - Dial barring

Each telephone can be disabled from using the 00 international area code and/or dialing codes programmed in a specific table.

Remark: Eventual dialling lockouts on a specific extension, enables however full use of the shortcut numbers table, from that terminal.

Barring programming. The table of enabled/disabled dialing codes must be completed (see chapter "System Programming", item ? "Programming dialing codes enabling/disabling table" code 5 xnn yyy), and then the barring must be set for each extension (see chapter "System Programming", item ? "Programming terminals" code 4d8 for 00 barring and 4d7 for barring of dialling codes programmed in the table).

Barring bypass. Those knowing the system password (used during programming) can bypass this barrier by dialling **70** followed by the **password** and **R**. Then, after the outside dialing tone, dial the outside number required. The lockout is restored when hanging up the handset.

Deactivation. The lockout must be reprogrammed on the individual terminal, or the table must be totally cancelled (see chapter "System Programming", item ? "Resetting dialing codes enabling/disabling table" code 59).

7.2 - Speed-dialing numbers (3nn)

To use a speed-dialing number, lift the handset,listen to the PBX (continuous) tone, then dial 3 followed by the address nn of the required number. A tone identifying the ringer of the called number is heard.

*Remark: should the immediate access upon lifting the handset be activated (ref. Primary Services), and, therefore the dialing tone is heard, press the **R** key immediately after lifting the handset, to obtain the switchboard (continuous) tone, then dial **3** followed by the speed-dial number **nn** required.*

The speed-dialing phonebook can contain up to 40 numbers. A speed-dialling number address is a two-digits code related to an outside number (max 30 digits), and enabling fast access to the outside party. Speed-dialing address numbers range between 00 and 39.

Programming speed-dialing numbers. All the speed-dialing numbers can be stored in the phonebook as described in chapter "System Programming", item ? "Speed-dialing numbers" code + nn + yyy…). Content of the table can be checked through a voice help.

Speed-dialing numbers 36, 37 38, 39 are also used for the Hot Line service (see the "Special Services" paragraph below).

Speed-dialing number 30 is also used for the Message stored in the answering machine and Call Forwarding services (see the "Communications management on private lines" paragraph, below).

7.3 - Outside calls disabling and emergency numbers

Each telephone can be programmed to prevent it from using one or both outside lines (see chapter "System Programming", item ? "Programming terminals" codes 4d1 or 4d3 for outside line 1, and codes 4d2 or 4d4 for outside line 2).

Nevertheless, a telephone disabled from accessing an outside line can, access an outside line to dial one of the following emergency numbers: 100,101,112.

Remark: the line must first be accessed by dialing 0 (zero) or equivalent procedure, emergency numbers can then be selected.

8 – CLIP Service (Caller Line Identification Presentation)

The CLIP service, supplied by the local operator, enables users equipped with a suitable terminal to display the caller identification, (i.e. the calling number).The LINKCOM 2800 CLIP PBX allows the use of these terminals on all extensions : the display of the internal and external caller identification is set by default. However individual telephones can be duly selected by programming the extension 41, dialling : **98 1234 56 d R** according to the following table :

	D	Meaning
56	**1...8**	Extension enabled CLIP 41--48
	9	No extension enabled

Remark :

- *To disable a single extension, disable all extensions first, and then enable the remaining ones*
- *Several telephones can be sequentially programmed, for instance 98 1234 56 12345678 R.*

For instance : if telephones #44 and #45 must be disabled, dial :

98 1234 56 9 123678 R. from terminal 41

8.1 OUTSIDE CALLS DISPLAY

With reference to the CLIP service, the LINKCOM 2800 CLIP operates in a "transparent" mode, i.e. the caller identification signal is addressed to the telephone when sent by the network, and with priority to the internal calls.

It is recommended to enable ringers for a single line each.

For instance, enable respectively :

41 ÷ 44 → L1

45 ÷ 48 → L2

If one extension ringer is enabled for both lines, in case of overlapping calls, only one caller identification shall be displayed with the following criteria :

for extensions **41 ÷ 44 line 1** has priority

for extensions **45 ÷ 48 line 2** has priority

This means that, if a call on line 1 arrives first, and all telephones are enabled for the service and for the ringer, the identification shall be displayed to all extensions. If a call on line 2 overlaps, the extensions 41 ÷ 44 shall keep ringing and their display shall not change, while from 45 ÷ 48 shall now ring for the call on line 2 and show this latter identification.
If a FAX Switch service is enabled, display of caller identification is not possible; the same applies for all extensions not idle at first ring (e.g., already engaged in a conversation with another phone), or when their ringer is disabled.
Should the switchboard be unable to send the identification of the call in progress, those extensions shall likely display the message "not availbale".

8.2 ENABLING THE CLIP SERVICE ON A SINGLE OUTSIDE LINE

The LINKCOM 2800 CLIP enables by default the display of incoming callers identification on both outside lines. In order to discriminate the service on a single line Ln, follow the procedure indicated in par. ? : "Programming outside lines (code 6Lx)", using code X = 7 of Table 2.
For example : to disable caller identification display on line 2, dial from extension 41 :

98 1234 627 R

8.3 INTERNAL CALLS DISPLAY

All LINKCOM 2800 CLIP extensions (wherever equipped with a suitable phone) can display the identification of the internal telephone calling.
This identification is transmitted to the extensions after the first ring of the internal call in progress.
In order to prevent the number associated with an internal call from erasing one of the numbers previously stored as calls on an outside line, please dial

98 1234 54 d R from extension 41 according to the following table :

	D	Meaning
54	**1...8**	Extension enabled CLIP 41--48
	9	No extension enabled

Remark :

- *To disable a single extension, disable all extensions first, and then enable the remaining ones*
- *Several telephones can be sequentially programmed, for instance 98 1234 54 12345678 R.*

For instance : if #47 and #48 must be disabled, then dial :

98 1234 54 9 123456 R from extension 41

SPECIAL SERVICES

9 - Room Monitor (49)

It is possible to listen to what happens in another room; for instance, in order to monitor the child room.

Lift the handset of the telephone located in the room to be monitored,dial **49** and leave the handset off-hook. When this extension is called from any other phone, a voice communication is automatically established, and anything occurring in the room can be monitored.

Remark: the service is also available from a remote telephone equipped with tone dialling mode, using the "Direct Selection" function described below.

WARNING: Improper or unlawful use of this function can involve violation of a room privacy.

10 - Hot Line (85 R)

A specific setup can enable a sequence of 8 attempts to call outside numbers programmed as shortcut numbers with codes 39, 38, 37 and 36, when lifting the handset without dialling for 20 seconds; each attempt lasts 60 seconds and is 16 seconds apart from the next.

REMARK: the continuous tone can be heard for approximately 10 seconds,then the congestion tone for additional 10 seconds.

After dialling each number, the connection with the party called is established for 60 seconds: after that, a short warning tone is heard to inform the caller or the party called that:

- * should be dialled to continue the eventual conversation in progress for 60 additional seconds and condude the attempts to call
- # should be dialled to stop further attempts to call.

Activation. To enable the Hot Line service, dial **85** then press the **R** key on the telephone where the service is to be activated.

Disabling. To disable this service, dial **86** then press the **R** key on the same extension.

Furthermore, during each attempt to call, a user-recorded message (called "Hot Line Message") of up to 30 seconds can be sent twice. This message is recorded following the procedure described in chapter "System Programming" item 10 "General message", with code 813.

Hot Line message check. To check proper Hot Line message programming (if recorded), refer to the procedure described in chapter "System Programming" item ? "General message", with codes 814 and 810.

Remark: The recoding of the specific Hot Line message is made through the programming procedure called General Message Recoding. This recording (however optional for service activation) prevents the Night Service Answering Message function, as well as an eventual Direct Selection (DISA) service specific message, described below.

11 - Night Service answering message

In Night Mode, an automatic answer can be activated for calls incoming on a specific outside line, by sending a user-recorded 30 seconds long Answering Message.

Remark: the service requires the outside line to be programmed for the Answering Message as well as Answering Message recording, using the procedure called "General Message Recoding."

98 1234 613 R to program line 1 for the Answering Message;
98 1234 623 R to program line 2 for the Answering Message;
98 1234 811 R to record the Answering Message.

The message, up to 30 seconds long, is repeated twice before hanging up; during transmission, the ringer remains on for the terminal enabled to receive calls during Night Service, calls can be answered, and the message is interrupted, and a connection with the caller is established.

Activation/Disabling. The service, when setup through programming, is activated and disabled together with the Night Service.
Remark: the recording of the Answering Message prevents from using a specific Hot Line Service Answering Message function, as well as an eventual Direct Selection (DISA) service specific message, described in the relevant paragraph.

12 - Direct Incoming Call (DISA or direct incoming selection)

A specific telephone can be directly called from the outside through a specific programming. This possibility is available if the outside call is made from a tone dialling mode telephone.
When an outside call is received, the switchboard automatically answers and sends a pre-set welcome message to the caller and a voice help, consisting of a short music tune (tune type) and of the words "*dial the extension required or hold the line*".
Upon message completion, the switchboard waits a few seconds for the eventual tone dialling from the caller:

- if the switchboard recognizes a telephone number being dialled, the call is transferred only to the telephone selected for 20 seconds and, in case of no answer, on all terminals whose ringer is enabled, for an additional 20 seconds.

If the "Room monitor" function was previously activated on the selected terminal, the connection is automatically established for 60 seconds.
If the "immediate call transfer" function was previously activated, the call will be transferred as set.

- if the switchboard fails to recognize a complete or correct selection, the call is transferred to all enabled extension for 20 seconds.

Setup. To set up the Direct Selection service, configure outside lines on which the service is to be activated (see chapter "System Programming" item ? "Programming outside lines", code 6L2).
It is possible to change only the welcome message (4 seconds) with a user-recorded message of the same length, using the recording procedure described in chapter "System Programming" item ? "DISA welcome message selection", codes 65x and 83x.
Both the welcome message (4 seconds) and the voice help can be replaced with a single user-recorded message of maximum 30 seconds (Direct Selection message), using the recording procedure described in chapter "System Programming" item ? "General message", code 812.
Finally all voice messages can be cancelled using the recording procedure described in chapter "System Programming" item ? "DISA welcome message selection", code 691.
Please note that the Direct Selection message recording deletes the recording of the eventual Hot line or Night Service messages.
Activation. To enable the Direct Selection service, dial **911** then press the **R** key from any terminal.
Disabling. To disable this service, dial **910** then press the **R** key from any terminal.
Remark: The recording of the specific Direct Selection message is made through the programming procedure called General Message Recording. This recording (however optional for service activation) prevents the Night Service Answering Message function, as well as an eventual Hot Line service specific message, described elsewhere.

13 – Direct Incoming Selection during Night Service

The above DISA mode can be maintained in Night Service; furthermore, in this case, the pre-set DISA message should be replaced with a suitable Direct Selection message, being used also during day mode.
For instance: "You have reached Company Rossi & C. Please hold on: dial 48 to send a FAX…"
Should the calling party fail to dial a selection, the call is transferred on terminals programmed as night terminals, and, in particular, to the answering machine (if available).

14 - FAX functions

If the extension connected with the FAX is programmed, some utilities for the FAX service are automatically implemented.

14.1 – Immediate access of the outside line. The terminal configured as FAX is automatically configured with immediate line access upon off-hooking. (Ref. Primary Services) of the first outside line programmed in Direct Selection activity.

14.2 – Call capture. An outside call answered by the FAX terminal, can be "captured" by any terminal, and therefore taken away from the FAX, by dialing **71** after lifting the handset.

14.3 – FAX– Switch during Direct Selection. If the Direct Selection (DISA) Service is activated, the switchboard, upon completion of the welcome message and voice help, automatically adds the words "dial 4d for the FAX", where "4d" is the FAX extension number.

After sending the message, the switchboard checks for a few seconds, while waiting for an eventual selection from the caller, if the call originates from an automatic FAX machine, equipped with the CNG tone. If the FAX call signal is identified, the call is automatically transferred to the FAX terminal. Furthermore, upon completion of the call transfer to all terminals enabled (should a phone selection or a FAX call signal fail to be recognized), if no extension answered, the call is in any case transferred also to the FAX terminal for 30 additional seconds.

14.4 – FAX during Night Service with Answering Message Activated

During Night Mode, the switchboard, after automatically replying to an incoming call, checks for a few seconds, before sending the recorded message, if the call originates from an automatic FAX machine, equipped with the CNG tone. If the FAX call CNG tone is recognized, the call is automatically transferred to the FAX terminal.

Should the CNG signal fail to be identified, after the second transmission of the recorded message, if no phone answered, the call is in any case transferred also to the FAX terminal for 30 additional seconds.

Remark: the above function requires, in addition to programming the "Night Service Answering Message" function, also the activation of the "Direct Selection" (DISA) Service.

FAX terminal programming. Assign the fax terminal via the "System Programming"item ?"FAX terminal", code 804d.

Programming reset. Cancel FAX terminal allocation using the same procedure, dialling code 80.

15 - Answering* telephone *machine functions

If the extension connected with the answering machine is programmed, some utilities supporting the answering machine service are automatically implemented.

15.1 – Call capture. An outside call answered by the answering machine, can be "captured" by any telephone, and therefore taken away from the answering machine, by dialling **71** after lifting the handset.

14.2 – Stored message notification for outside and door phone calls (if activated). If the "Answering Machine Function" is programmed, to ensure that the "Stored message notification" service is activated, an outgoing message at least 15 seconds long must be recorded. This will cause 6 call attempts to the external number programmed as shortcut number 30, after a message is recorded.

During each call attempt, a short pre-programmed voice message is sent 8 times, constituted of the 4s welcome message (already used for the Direct Selection service) and of the words "Message stored in the answering machine".

In the pauses between each voice message, the party called can dial "*" on a tone dial phone, stopping the message sequence, and generating a call to the answering machine extension: upon answering machine reply, the remote user can poll it using the appropriate access codes.

To activate the service, dial **921** followed by the **R** key from any extension. To disable it, dial **920** followed by the **R** key.

REMARK: A call to the shortcut number 30 is activated 30 seconds after the last message was stored on the answering machine.

Answering machine extension programming. Assign the answering telephone machine through the "System Programming" item ? "Answering telephone machine ", code 404d.

Programming reset. Cancel answering machine extension allocation using the above procedure, dialing code 40.

PRIVATE NETWORK COMMUNICATIONS MANAGEMENT

The following services are reviewed here: Call Forwarding for unanswered calls, Immediate external forwarding, and the DOSA service, which are available should the Direct Selection service be activated in advance.

Warning: the above services are available only on outside lines configured as "private" lines (see chapter "System Programming" item ? "Programming outside lines", code 6L5), since they are not allowed on a standard outside line.

The access mode of a line configured as private is different from that of an outside line, as explained below.

16 - Call Forwarding (for unanswered calls)

As additional Direct Selection service the forwarding of unattended outside calls to the shortcut number with code 30 can be activated.

Forwarding is automatic, and uses the other switchboard line (if available) dialling the above shortcut number. After dialling, the connection with the party called is maintained for 60 seconds: after that, a short warning tone is heard to inform the called party that, a digit must be dialled on a tone telephone to continue the eventual conversation in progress for 60 additional seconds.

Setup and Activation. Setup the Direct Selection Service (see previous paragraph) and program shortcut number 30 (see chapter "System Programming" item ? "Speed-Dial Numbers", code 30 yyyy…); then lift the handset from any telephone and dial **961** followed by the **R** key.

Disabling. Lift the handset from any telephone and dial **960** followed by the **R** key.

A voice message confirms service activation or disabling.

Remark: The service is not available in Night Mode when the answering message function is active.

17 – Outside forwarding (immediate for calls to a specific device)

An additional Direct Selection service is the forwarding of calls to any extension to an outside number contained in the shortcut number list.

Forwarding is automatic and uses the other switchboard line (if available), dialling the above shortcut number. After dialling the connection with the party called is maintained for 60 seconds: after that, a short warning tone is heard to inform the called party that, a digit must be dialled on a tone telephone to continue the eventual conversation in progress for 60 additional seconds.

Setup and Activation. Setup the Direct Selection Service (see previous paragraph) then lift the handset and dial **23nn** followed by the **R** key to activate the terminal to the speed-dialing number with code 3 nn. A voice message confirms forwarding activation.

Check: Dial **240** followed by the **R** key to know which transfer was activated

Disabling. Dial **88** followed by the **R** key to disable transfer.

Remark: When a transfer is activated, the continuous switchboard tone when lifting the handset is periodically interrupted.

18 – DOSA or Direct outgoing selection

The remote caller, using a tone telephone, can control the access of the second switchboard outside line, and use it to dial directly (if the line is configured in tone dialing mode) within the Direct Selection procedure (DISA).

Access to this service is protected with a DOSA password, different from the programming password, set by default as **3007**.

Dial *** (DOSA password) 8**

after receiving the help voice message to remotely activate this service.

The other line (if available), configured as private line and with tone dialling mode, is engaged, and a voice connection between the caller and the line is established: the caller can therefore dial from his/her telephone in tone mode using this line.

The call to the outside number is timed at 60 seconds: after that, a warning tone is heard to inform the caller that, a * must be dialled on a tone telephone to continue the eventual conversation in progress for 60 additional seconds.

REMARK: The DOSA service access password can also be used to program the switchboard. On the contrary, the programming password cannot be used to access the DOSA service.

19 – Private line outgoing access mode

Lift the handset, listen to the continuous tone, then dial **20** and, when hearing the dialling tone, dial the number required.

The first private type line is automatically accessed. Successive outside calls access alternatively the two lines (if available).

SYSTEM PROGRAMMING

A certain number of functions can be programmed and customized using specific parameters, through extension 41. Programming is protected with a "password" (4-digit numerical code).
The following table shows all possible programming options.
Programming procedure is the following:
1 – Lift the handset of telephone 41 and wait for the continuous tone.
2 – Dial code **98** followed by the 4 digits of the programming password (default value: **1234**). *The password can be changed by the user but, in the following description, the default value will be used.*
3 – Dial the **programming code** for the function required, with the eventual parameters needed.
4 – Press the **R** key to validate programming (should the R key be unavailable on the telephone, briefly press the handset hook).
5 – Wait for a confirmation tone made of 3 short tones, or an eventual voice message (an eventual busy line tone indicated that the programming was not accepted).
6 – Repeat steps 3, 4, and 5 without replacing the handset to program other functions.
The programming can be recorded manually in the "LINKCOM 2800 CLIP PROGRAMMING TABLE" enclosed with this manual.

PROGRAMMING CODES TABLE

Ref.	Code	Function	Default value
1	**84 x**	Flemish language x = 0 French language x = 1	0 = Flemish lang.
2	**90 yyyy**	Change programming password	1234
3	**95 yyyy**	Change DOSA access password	3007 and 8
4	**4d x…**	Terminals programming (4d=41…48)	See table 1
	58 d	Disable tones during conversation	Tones enabled
5	**97 d**	Telephone Tone Mode only with "short" calibrated opening (50-160ms)	80-160ms
	98 d	Terminals with "long" calibrated opening (80-800ms)	80-160ms
6	**nn yyyyyyy…**	Speed-dial numbers (nn = 00…39, max 30 digits)	Empty
	49	Speed-dial numbers reset	
	96 nn	Speed-dial number nn check	
7	**6 L x…**	Outside lines programming (L = 1, 2)	See table 2
8	**5 x nn yyyy**	Dialling enable/disable table (x=0,1): nn = 00…09	Empty See table 3
	59 x	Enable/disable table reset	
9	**63 x**	On hold tone (music/tune)	0 (music)
	82 x	On hold music (play/record)	

Ref.	Code	Function	Default value
10	**65 x**	DISA welcome message selection (tune/ recorded message)	0 (tune)
	83 x	DISA welcome message (play/record)	
	69 x	Cancel (x=1)/restore (x=0) DISA welcome message	0 (enabled)
11	**81 x**	General message, 30 s (play/record/type)	0 (tune)
12	**80 4d**	FAX terminal (4d = 41…48)	Empty
13	**40 4d**	Answering telephone machine (4d = 41…48)	Empty
14	**66 x**	Door phone ringer rhythm	0 (non-regenerated)
	67 xx	Gate lock release impulse duration	04 (4 sec)
15	**91…94**	Default configurations	
16	**56 d**	Extension enabled for CLIP	All
	54 d	Internal CLIP enabled	All

Optional Section			
17	**89 yyyyyyy…**	Clock(month-day,month,year,hour,minutes, seconds)	
	88 x	Printout type	0 (see table 4)

18	**99**	Restore default configuration	

Legend: Index L is the outside line number (1,2), index d is the extension number (1…8), index nn to a table address (00, 01, 02,…), index x to the input parameter (0, 1,…), group yyy to the input value.

1 – PROGRAMMING THE LANGUAGE

Flemish or French languages can be set in the LINKCOM 2800 CLIP for the Belgian market .
The choice of the language can be made through the extension 41, with the following procedure:
98 1234 84 0 , then press the **R key,** for Flemish
98 1234 84 1 , then press the **R key,** for French
The chosen language setting is confirmed by the relevant message: " Service activated".
The system is equipped with Flemish language by default.
In case of any change between the two languages, the supported messages performed for DISA, HOT LINE & NIGHT SERVICE will be lost, accordingly. For any new language setting a new message-recording is needed.

2 – PROGRAMMING PASSWORD CHANGE (CODE 90)

The programming password can be changed at any time to protect the programming, using the following procedure: **98 MMMM 90 NNNN NNNN R**.
Where MMMM is the current programming password, and NNNN is the new password. The new password must be entered twice for the system to check its content: if they are different, the request for modification is rejected. Both present and new passwords must consist of 4 digits.

3 – DOSA ACCESS PASSWORD CHANGE (CODE 95)

This second password, used to protect access to the DOSA service, can be changed using the following procedure: **98 MMMM 95 NNNN NNNN R**.
Where MMMM is the current DOSA password, and NNNN is the new password. The new password must be entered twice for the system to check its content: if the two new passwords entered are different, the request of modification is rejected. Both present and new passwords must consist of 4 digits.
WARNING: ***Do not forget your passwords***. *Otherwise, refer to chapter "Troubleshooting" to restore the default passwords.*

4 – PROGRAMMING TERMINALS TYPE (CODE 4d x…)

A certain number of functions (see table 1) can be programmed for each extension from 41 to 48. After dialling the access code (98) and the password, dial the number of the extension to be programmed (e.g., **44**), then a code (**x**) or the codes sequence (**x x x** …) for the functions to be activated : **98 1234 4d x R**

TABLE 1

X	Function	Default value
0	Indusion enabled	No
1	Line 1 fully disabled	Fully enabled
2	Line 2 fully disabled	Fully enabled
3	Line 1 enabled only for incoming calls	Fully enabled
4	Line 2 enabled only for incoming calls	Fully enabled
5	Night mode line 1	No
6	Night mode line 2	No
7	Long distance calls lockout according to table 3	No
8	00 international codes lock-out	No
9	Default values restore	
*****	Line 1 immediately accessed when lifting handset	No
#	Line 2 immediately accessed when lifting handset	No

For instance, 98 1234 44 3 4 R indicates that extension 4 is enabled only to receive incoming calls on outside lines 1 and 2.

- Extension whose access is disabled in full or in part (x = 1, 2, 3, 4) cannot access speed-dialing numbers. ***They can however place calls to the following emergency numbers: (110, 101, 112 and other emergency numbers)***.
- Terminals subject to long distance dialing lockout (x = 7,8) can access speed-dialing numbers.

Remark: several terminals can be sequentially programmed. For instance: the programming used to enable dialling lockouts of table 4 and to dialling code 00 to terminals 44 and 46, can be as follows:
98 1234 44 7 8 R 46 7 8 R.

4.1 – TONES DISABLING DURING CONVERSATION (CODE 58d)

Each terminalcan be exduded from receiving warning tones, such as for instance an incoming call notification on an outside line, or the line on-hold notification during the conversation. This programming is useful should a modem be connected on the extension, since these tones could interfere with its receiving. Programming code 58 d can be used to disable these tones as shown below.

98 1234 58 d R:

	d	Meaning
58	**1…8**	Tones disabled on extensions 1…8
	9	Tones restored on all extensions

Remark: several extensions can be sequentially programmed, e.g.: 98 1234 58 12345678 R

5 – CALIBRATED OPENING RECOGNITION CHANGE (CODES 97d and 98d)

If you press the R key of your telephone during a conversation, it transmits a "calibrated opening". This is an opening whose duration is limited in time, in order not to simulate a line interference or a hang-up. Recognition time is set by default in the 80-160 ms range: this range can be changed to 50-160 ms (*available only on tone dialling telephones*) or to 80-800 ms range; this programming enables to adjust R key recognition to the characteristics of the devices made by different manufacturers. *If the R key is not available, as in pulse-only devices, the same signaling criteria can be generated by a brief pressure on the telephone hook.*

Programming codes 97 d and 98 d enable to modify calibrated opening recognition for terminal 4 d as shown below.

98 1234 9X d R:

	d	Meaning
97	**1…8**	Changes to 50-350 ms on terminal 1…8 (see remark)
	9	Restores the 80-350 ms range on all terminals
98	**1…8**	Changes to 80-800 ms on terminal 1…8
	9	Restores the 80-350 ms range on all terminals

Both 97 and 98 programming can be made, should it be necessary to extend recognition range to 50-800 ms: e.g. 98 1234 97 4 R 98 4 R.

Remark: warning, do not make this programming on pulse telephones.
Several terminals can be sequentially programmed, e.g.: 98 1234 98 12345678 R

6 – SPEED-DIALING NUMBERS PROGRAMMING (CODES 00 to 39)

The system allows programming a 40 numbers telephone book, each associated to a two-digit address. Dial speed-dialing address nn (from 00 to 39) after the password, followed by the full telephone number (max. 30 digits) to store the number into the phone book. To insert a pause for intermediate tone (or a 10 seconds pause without tone) dial # twice (within 2 seconds).

98 1234 nn yyyyyyyyyy… R.

For instance: 98 1234 00 022021 R programs telephone number 022021 with speed-dial address 00: if no input is entered as yyyy…, the shortcut number eventually programmed is canceled.

Shortcut numbers 36, 37, 38, 39 are also used for the "Hot Line" function.

Shortcut number 30 is also used for the "Message stored in the answering machine" or "Call forwarding" function.

The speed-dial numbers table can be cancelled by dialling code 49:

98 1234 49 R

Remark: A telephone is not enabled to short-dialing when local outgoing calls are disabled on it.

To check shortcut number nn in the table, dial code 96:

98 1234 96 nn R.

A voice message gives in sequence the digits of the full number corresponding to shortcut code nn.

7 – OUTSIDE LINES PROGRAMMING (CODE 6 L x)

Some functions can be programmed for each outside line (L1 and L2) (see table 2). After dialling the access code (98) and the programming password (1234 by default), dial code **6** followed by the line number to be programmed (1 or 2), then one (**x**) or more (**xx**…) sequential codes for the functions to be activated.

98 1234 6 L xx… R.

TABLE 2

X	Function	Default value
1	Pulse dialling (1)	Tone dialling
2	Direct Selection function (DISA/FAX Switch) (2)	Disabled
3	Night mode answering message (3)	Disabled
4	Line enabled only for incoming calls	Two-way
5	Private line (with access to private network services)	Outside line
6	Shortcut disabled	Enabled
7	CLIP service disabled	Enabled
9	Default values restore	

Remark:

(1) This programming requires that the telephones connected to the extensions are pulse-dialing devices, since tone-dialing devices cannot dial in pulse mode on outside lines (these devices could, however, dial outside using speed-dialing codes).

*(2) Direct Selection function requires activation of the service through code **911 R,** as indicated in the operation mode.*

*(3) Night Mode Answering Message function requires message recording and Night Mode implementation through dedicated code **901 R**, as indicated in the operation mode.*

8 – PROGRAMMING DIALLING CODES ENABLING/DISABLING TABLE (CODE 5 x nn yyyy)

A table containing 10 max. 4-digits dialling codes (yyyy) identified as disabled or enabled codes (exception to disabled codes) can be created. For example, dialling code 0 can be disabled (thus disabling all long distance and international calls), while leaving only dialing code 06 enabled.
Disabled dialling codes must be entered with code x = 0, enabled codes with code x = 1.
The value nn indicates table 3 address (from 00 to 09).

98 1234 5 0 nn $y_a y_a y_a$ R to disable dialing code $y_a y_a y_a$

98 1234 5 1 nn $y_b y_b y_b$ R to enable dialing code $y_b y_b y_b$

TABLE 3

x (0 or 1)	nn	dialling codes	x (0 or 1)	nn	dialling codes
	00			**05**	
	01			**06**	
	02			**07**	
	03			**08**	
	04			**09**	

For instance, to disable all dialling starting with 0, dial:

98 1234 5 0 00 0 R

but to enable dialing to 06 and 02 districts dial (without hanging up):

5 1 01 06 R 5 1 02 02 R

Remark: long distance lockouts programmed in the table apply only to extensions programmed for dialling lockout (see table 1).

The enabling/disabling table can be reset by dialing code 59:

98 1234 59 R.

Remark: an extensions where this table is disabled can in any case dial all shortcut numbers..

9 – MUSIC SELECTION OR RECORDING FOR OUTSIDE CALLS ON HOLD (CODES 63 x, 82 x)

A short 4-notes selection (tune type), or a 20 seconds music can be selected for transmission on both outside lines, when on-hold.

98 1234 63 1 R to select the 4-note tune.

98 1234 63 0 R to select the 20 seconds music.

In the latter case, either the music pre-programmed in the switchboard, or a customized music recorded through the handset of the extension from which the programming is conducted, can be chosen. The sequence:

98 1234 82 1 R enables to record a new music.

98 1234 82 0 R enables to listen to the 20 seconds music.

WARNING: the recording of a new music cancels the pre-programmed music, and makes it irretrievable.

After dialing the above code, the voice message "record after the beep", informs that the recording can start. Since the music is repeated every 20 seconds pauses in between, should it be necessary to avoid undesired stop/restart effects, it is recommended to lower the volume of the music towards the end of the recording.

10 – DISA WELCOME MESSAGE SELECTION OR RECORDING (CODES 83 x, 65 x)

The Direct Selection (abbreviated with the acronym DISA = Direct Inward Selection Access), is designed to enable the switchboard to automatically answer every incoming outside call, and the transmission to the caller of a voice help message constituted of :

- a short welcome message constituted of a 4-notes tune. (usable also as an alternative to on-hold music)
- the pre-programmed message "*select the extension required or hold the line*", to which "*dial 4d to send a FAX*", if the fax is programmed.

The 4-notes tune can be replaced with a 4-seconds customized welcome, recorded by the user through the handset: (the same customized welcome is also usable as an alternative to on hold-music):

98 1234 83 1 R enables to record a customized welcome message.

After dialing the above recording code, the voice message "record after the beep" informs that the recording can start.

98 1234 83 0 R enables to play the customized welcome message.

The option of transmitting the tune-type instead of the personal welcome message is available at all times. To do so proceed as follows:

98 1234 65 0 R selects the tune-type music

98 1234 65 1 R selects the customized welcome message.

The following sequence disables the transmission of all voice messages:

98 1234 691 R disables the message

98 1234 690 R restores the message.

11 – GENERAL MESSAGE RECORDING FOR ONE OF THE FOLLOWING SERVICES: DIRECT SELECTION, ANSWERING MESSAGE OR HOT LINE (CODE 81x)

A message up to 30seconds can be programmed "fully recorded" by the user through the handset of the telephone used for the programming, for use in one of the above services.

WARNING: use of a "General recorded message" in a service prevents its use for the other services. Dial

98 1234 81 1 R to record the message for the Answering Service

98 1234 81 2 R to record the message for the Direct Selection Service (replacing the pre-programmed welcome and voice help sequence)

98 1234 81 3 R to record the message for the Hot Line Service.

After dialling the recording code, the voice message "record after the beep", informs that the recording can start. The recording ends after 30 seconds or when hanging-up the handset (if the message is shorter).

98 1234 81 0 R to play the message recorded.

To check the service for which the message was recorded, dial:

98 1234 81 4 R

the voice message "*direct selection message programmed*", "*Hot Line message programmed*" or "*Night mode message programmed*" is heard.

Remark: to cancel a message, dial the message programming sequence and hang up after the "beep". Furthermore, to restore the Direct Selection default welcome and voice help message, record a message for the Hot Line Service (even when not used).

The following Services/Messages table details all combinations for the messages relevant to the three above services:

Service Table ⇔ Messages

Direct Selection (DISA)	HOT LINE	NIGHT MODE ANSWERING
Default Message (welcome+voice help)*	General recorded message	- Not available -

Direct Selection (DISA)	HOT LINE	NIGHT MODE ANSWERING
Default Message (welcome+voice help)*	-Service with no message -	General recorded message

Direct Selection (DISA)	HOT LINE	NIGHT MODE ANSWERING
General recorded message	-Service with no message -	- Not available -

*the Welcome message can in any case be customized by the user.

12 – FAX SWITCH FUNCTION; FAX TERMINAL PROGRAMMING (CODE 80 4 d)

The implementation of this function requires three different operations:

1 - Selection and setup of the outside line associated with the FAX;
"Direct Selection" or "Night mode answering message" service setup;
2 - Selection of an extensions associated with the FAX;
3 - Service activation/disabling.

1) Dial

98 1234 61 2 R to select line 1
98 1234 62 2 R to select line 2

to select the outside line and to activate the "Direct Selection" service.
Alternatively, the FAX Switch, Direct Selection, Night mode answering message function can be simultaneously activated by dialling :

98 1234 61 23 R to select line 1
98 1234 62 23 R to select line 2

2) The terminals associated with the FAX is setup dialing :

98 1234 80 4d R (4d = terminal number 41…48).

The 98 1234 80 R cancels this programming.
Remark: the extension configured as FAX terminal directly accesses the line when off-hooking.

3) ***Activation***. To activate the Direct Selection, and therefore the FAX Switch service as well, dial **911 R** from any extension.
Disabling. To disable the service, dial **910 R** from any extension.

13 – ANSWERING MACHINE EXTENSION PROGRAMMING (CODE 40 4d)

This code associates an answering machine to a system extension : **98 1234 40 4d R**.
This code cancels the programming of an answering machine in the system **98 1234 40 R**:
This programming can be associated with the Message Stored in the Answering Machine service activation code **921**.

14 – DOOR PHONE INTERFACE PROGRAMMING (CODES 66 x 67 yy)

Please refer to the "DOOR PHONE INTERFACE" chapter.

15 – SELECTING A DEFAULT CONFIGURATION (CODES 91 to 94)

Each of these codes enables a default configuration (A, B, C, or D) which can be satisfactory without any other operations, and therefore make service implementation far easier.

A) 98 1234 91 R: Access to outside lines is enabled to all terminals, no discrimination (dialing lockout) is defined.

B) 98 1234 92 R: Access to line 1 is enabled to terminal 41, all other terminals are disabled, and no dialing lockout is defined. Access to line 2 is enabled to all terminals 41 to 48, no dialing lockout is defined.

C) 98 1234 93 R: As in B), with international dialing lockout (dialing code 00) for terminals 42 to 48.

D) 98 1234 94 R: As in A), with ringer disabled on incoming calls from both lines, for terminals 42 to 48.

16 – CLIP SERVICE (Calling Line Identification Presentation)

The LINKCOM 2800 CLIP switchboard enables the display of the external and internal caller identification by default. However individual extensions can be customized through a programming from extension 41 by dialling: **87 1234 56 d R** according to the following table:

	d	Meaning
56	**1…8**	Extension enabled CLIP 41…48
	9	No extension enabled

Remark:

- *To disable a single extension, disable all devices first, then enable the remaining ones.*
- *Several telephones can be sequentially programmed, for instance 98 1234 56 12345678 R.*
- *Extensions supporting this service must be equipped with a display*

For instance: if extensions #44 and #45 have to be disabled, dial:

98 1234 56 9 123678 R. from extension 41.

INTERNAL CALLS DISPLAY

All LINKCOM 2800 CLIP PBX extensions can display the identification of the internal caller, too.

In order to prevent the number associated with an internal call from erasing one of the previously numbers stored as calls on an outside line, dial

98 1234 54 d R from extension 41 according to the following table:

	d	Meaning
54	**1…8**	Terminal enabled internal CLIP 41…48
	9	No Terminal enabled

Remark:

- *To disable a single extension, disable all devices first, then enable the remaining ones.*
- *Several telephones can be sequentially programmed, for instance 98 1234 54 12345678 R.*

For instance: if extension #47 and #48 have to be disabled, dial:

98 1234 54 9 123456 R. from extension 41.

17 – PROGRAMMING THE CLOCK, ETC. (CODES 89 yyy…, 88 x)

Please refer to the " CLOCK INTERFACE" chapter.

18 – RESTORING THE DEFAULT CONFIGURATION (CODE 99)

The switchboard default (set-up at first installation) configuration parameters can be restored by using code 99:

98 1234 99 R.

This programming restores default values of the user and line functions of tables 1 and 2, resets the value of the calibrated opening, dialling codes lockout table 3, and enables ringers on all extensions.

DOOR PHONE INTERFACE

INTRODUCTION

A (pre-existing) door phone system can be connected to the LINKCOM 2800 CLIP switchboard, enabling each extension to establish a voice connection with the outside door phone terminal, and to control the door-lock release.

Furthermore, this interface enables local or remote control of an electrical contact controlled by a relay.

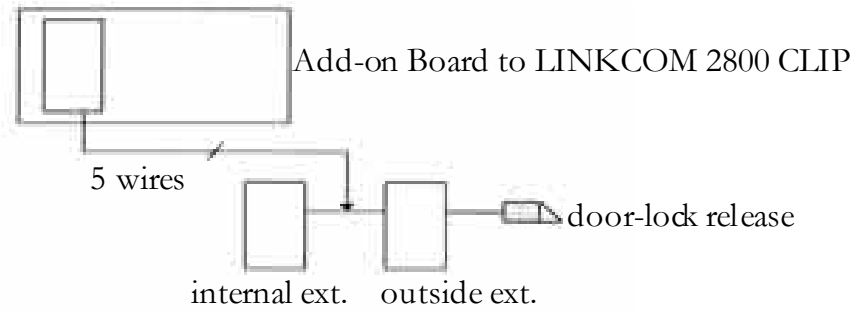
All types of door phone systems can be connected, provided they are 5-wire type with buzzer, operating at 12 or 24 V, and compliant with the safety norms in force.

No connection with the outside lines is available from the outside door phone extension and from any internal door phone extension

It is recommended to use a qualified installation company, able to use the following information for the connection to the door phone system.

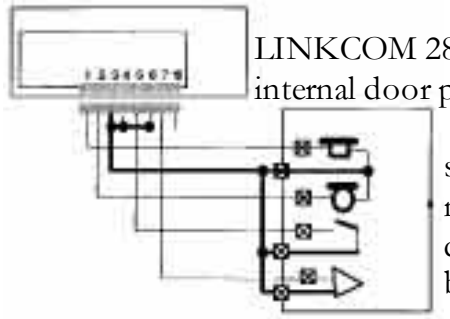
Connection principle

The add-on board is connected to the door phone system with 5 wires

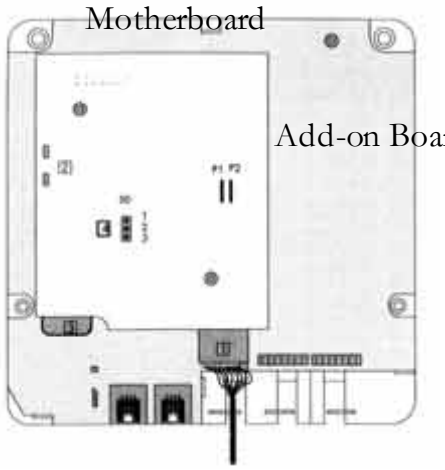


Connection diagram

An earth signal common with the voice, door-lock release contact and with the ringer signals, is carried to contacts 3, 4 and 6. Should the three earth signals be kept galvanically separated, cut the two jumpers P2 and P1 on the add-on board using nippers.

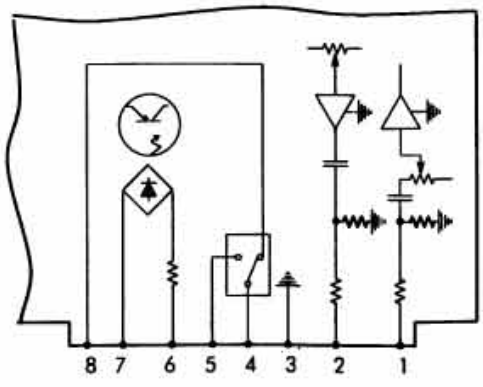


ADD-ON BOARD DESCRIPTION



The add-on board, located above the motherboard, contains the following main components:
Section 1: An 8-contacts mini-connector to the door phone system.
Section 2: Two potentiometers for transmission/receiving levels adjustment
Section 3: A 2-contacts connector to an electric contact
Section 4: a jumper to allow two operating modes for the electric contact
The distance between the door phone terminal and the LINKCOM 2800 CLIP switchboard must not exceed 30 meters. The diameter of the wires used for the connection must be 0.6 mm.

8-contacts mini-connector output contacts:

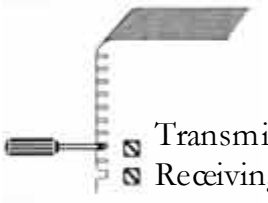


Contact	Function
1	Receiving
2	Transmission
3	Voice earth
4	Key earth
5	Lock release key
6	Buzzer earth
7	Buzzer
8	Not used

TRANSMISSION AND RECEIVING LEVELS ADJUSTMENT

Transmission and receiving sound level adjustment for the communications between door phone and switchboard is set through two potentiometers using a small screwdriver.
When the switchboard is dosed, two openings on the casing left side, give access to the potentiometers. Set transmission level first (upper potentiometer): set the volume level as low as

possible, compatibly with noise conditions outside. Then set receiving volume (lower potentiometer) at a suitable hearing level.



REMOTE CONTROLLED RELAY

The add-on board indudes a relay enabling control of an electric contact.

The output on the two relays must not exceed the following electric values: 26 VAC, 60 VDC, 2.5 A. However, insulation from eventual dangerous voltages, through a suitable safety separation device (insulation transformer or other equivalent devices), is required.

Jumper S0, located in the board lower section, enables the definition of relay activation duration. In position 1-2 the relay is permanently activated, and allows starting an electrical appliance (boiler, radio, lighting…). In position 2-3, the relay is activated for a pre-set period (see below), and therefore allows opening of an eventual gate.

DOOR PHONE INTERFACE PROGRAMMING

Ringer periods for a door phone call (code 66 x)

Those periods on extension in case of a door phone call can be changed.

98 1234 66 0 R: the ringer reflects the pressure applied on the call key (default value).

98 1234 66 1 R: the ringer periods consist of a pair of rings repeated every 5 seconds for 30 seconds.

Gate lock-release electric contact (Code 67 xx)

This code enables the definition of the control relay activation period for the opening of a gate. This period ranges between 1 and 50 seconds. The default value is 4 seconds:

98 1234 67 xx R, where xx = 01…50.

DOOR PHONE OPERATION

Incoming door phone call

A call from the door phone is received by terminals whose ringer is enabled and lasts approximately 30 seconds from the moment the call key is pushed; the call is answered by simply lifting the handset.

A connection with the door phone can be established simultaneously with two other internal calls.

The door phone ringer is initially enabled on all extensions; however, it can be disabled with the following codes:

80 followed by the R key: disables both the door phone and the outside line ringers;

84 followed by the R key: restores the door phone ringer.

If a door phone call is received during a conversation with an outside party, a warning tone is received. The outside party can then be put on hold pressing the R key: when the continuous tone is heard, dial 5 to establish the connection with the door phone. The outside call can be resumed with the same procedure used for a standard outside call.

Door phone call to the answering machine and notification to an outside number

The *Message stored in the answering machine* service (refer to Special Services), applies also to door phone calls handled by the answering machine.

To activate this service, program as follows:
- set the ringer frequency as repeated rings (code 98 1234 66 1 R);
- program the terminal "d" associated with the answering machine (code 98 1234 40 4d R);
- associate speed-dialing number 30 with the outside number required (code 98 1234 30 yyyyyyyy R);
- enable the "Message stored in the answering machine" service (code 921 R).

Service modes are described in the relevant section of the OPERATION MODE chapter.

Calling the door phone

To activate a connection with the door phone without a call from it, dial **6** (after lifting the handset).

Door-lock release during a door phone call

Dial **1** (followed by **R** if a tone dialling telephone is used) to open the door. The door-lock release relay is activated for approximately 2 seconds. Dial **2** (followed by **R** if a tone dialling telephone is used) to open an eventual gate (jumper S0 in 2-3 position).

Door-lock release without establishing a connection with the door phone

Dial **1** followed by **R** after lifting the handset to open the door. Dial **2** followed by **R** after lifting the handset to open an eventual gate (jumper S0 in 2-3 position).

CONTROLLED RELAY OPERATION

A relay can be controlled to start or stop an electrical device (boiler, radio, lighting, …).
Jumper S0 must be in 1-2 position.

Dial

971 followed by **R** to activate the relay
970 followed by **R** to disable the relay
from any extension, after lifting the handset.

Dial:

*** (1234) 7** to activate the relay
*** (1234) 6** to disable the relay
from a remote tone dialling telephone after the help voice message, provided the Direct Selection function is activated.
The number 1234 given in the previous notice corresponds to the programming default password and has to be replaced with the new password.
If the remote selection is received properly, a confirmation voice message is transmitted to the remote device.

Remark: in case of voltage breakdown the relay releases the contact and returns to its initial (disabled) position: the relay will restore its activated status only when voltage is restored (if previously set).
*In case of programming reset (default values restore using programming code 99), relay eventual activation must be confirmed dialling code **971 R**.*

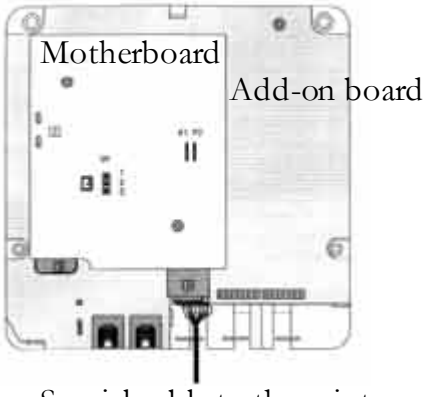
CLOCK INTERFACE

This interface is constituted of one specific board placed in the PBX and of a specific cable 2.5 meters long to connect the switchboard to an 80 columns serial printer (using an RS232 interface with a 25-pin connector).

The LINKCOM 2800 CLIP switchboard equipped with the clock interface can:
- send a detailed report for all outside calls to a printer
- implement a wake-up service for all extensions.

The printer is connected with the specific cable supplied on purpose
A "null modem" type adapter available on the market must be implemented for an eventual connection to a PC serial interface.
The printer must be set for 80 columns (10 cpi), 66 lines (6 lpi), and configured with the following parameters:
Speed 9600 baud, 8 bits, 1 start, 1 stop, DTR/DSR flow control type on pin 20.

ADD-ON BOARD DESCRIPTION



WARNING: *To connect the cable to the printer, the switchboard power supply cables and the connections to the outside lines must be disconnected, in order to unlock and allow cover sliding.* ***Connect the cable to the printer before closing the switchboard and before reconnecting the power supply and the outside lines.***

TELEPHONE TRAFFIC INFORMATION PRINTOUT

The printer must be supplied with endless form type paper.
Detailled call reports printout is made on a call-by-call basis upon completion of each call. The switchboard can store the detailled reports for 180 calls, should the printer connection be cut (e.g., to change the paper). These reports stored shall be printed when the connection is restored.
The call report includes the following data:
Date (day, month, year),Time (Hour and minutes), Call duration (minutes/seconds(up to 120s)), Calling telephone (#4d), Outside line accessed (L1 or L2), called Number. (in second up to 120 sec., then in minutes).
The printout can be activated also for incoming calls (with indication of the answering terminal, duration, date and time), and can be restricted to call lasting over 20 seconds.
Print control functions are defined in the same mode as the other programming functions, i.e.:

98 1234 88 x R to define the type of report to be printed according to table 4

98 1234 89 $y_1y_2…y_{12}$ R to set the date and time:

You can use those procedure to update quickly the change from sunlight to daylight – saving time.
(y_1y_2 = Day of the month; y_3y_4=Month, y_5y_6=Year; y_7y_8=Hour; y_9y_{10}=Minutes;$y_{11}y_{12}$ = Seconds)
You can use those procedure to update quickly the change from sunlight to daylight – saving time.
The sequence **98 1234 89 * R** decreases current time by one hour.
The sequence **98 1234 89 # R** increases current time by one hour.
In this way you change only the hour, but not the time change after midnight.

TABLE 4

X	Meaning
0	Printout disabled
1	Outgoing calls
3	Outgoing calls > 20s only
4	Incoming calls only
5	Incoming and outgoing calls
7	Incoming and outgoing calls > 20s

WAKE UP SERVICE

The Wake Up Service places a call at the time set from an extension and repeatedly sends the "Wake Up Service" voice message. The call lasts 50 seconds and an eventual wake up call for the following 24 must be reset.

Wake up time is programmed as hours/minutes of the day.

Programming code is the following:
27 hhmm R to set wake up hours/minutes
27 hhmm R to set wake up hours/minutes after hmm hours/minutes, max 9:59.

Other useful codes are:
27 R to disable the wake up call
28 R to check wake up service status
29 R to restore wake up service at the hour/minutes previously set
26 R to check current time
25 R to check current date and time.

WARNING: ***in case of power supply breakdown, the wake up service is not programmed and the switchboard keeps the clock running. In case of power supply drop at wake up time, the wake up ringer shall not work. If power supply is restored within one hour, the wake up call is placed upon power restore.***

TECHNICAL FEATURES

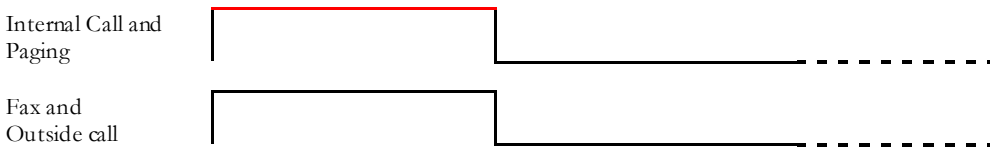
Power supply:
From network, through a wall-mounted adaptor:
Network voltage : 230 V/240 V – 50 Hz
Maximum power absorbed : 100 mA
Voltage supplied by the adapter:
24 V DC (200 mA)
12 V DC (150 mA).

Inside lines:
Maximum distance from a terminals the : 500 m with 0.6 mm bifilar wire

Outside lines:
Tone and pulse dialling mode
Calibrated opening : 240 ms

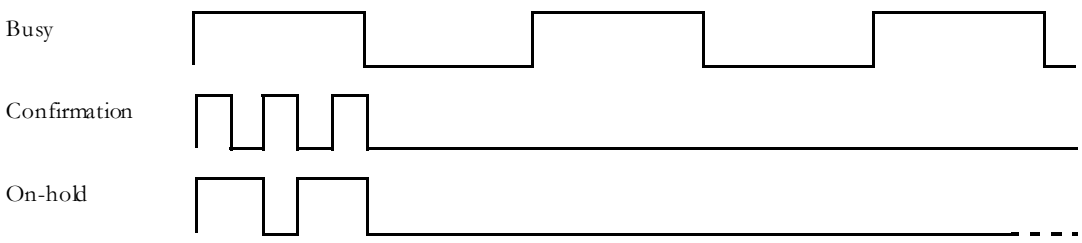
Mechanical features:
Weight : 400 g
Space required for switchboard and adaptor installation : 200x300 mm
Operating temperature : 0° - 40° C

Main ringers' cadence (*freq 25 Hz – voltage at no load 40 Vac*):



Dotted lines indicate signal cyclical repetition

Cadence of the main tones (*freq = 437 Hz*):



Dotted lines indicate signal cyclical repetition

Door phone interface:
System characteristics : 5-wires type with buzzer, operating at 12 or 24 V SELV.

Remote controlled relay:
Maximum voltage allowed on contacts : 26 VAC or 60 VDC SELV
Maximum current : 2.5 A

TROUBLESHOOTING

PROBLEM	CHECK	SOLUTION
Telephone not operating properly	Replace with a telephone with the same characteristics	If the problem continues, the system is faulty. If the problem is solved, the device needs repair
Only terminals 41 and 45 operate	Check system LED	The LED is off, lack of power supply (faulty or no connection between switchboard and adapter…)
Interference during conversation. All incoming and outgoing communications are interrupted.	Check connection between and system (PBX) telephone sets	Reset device-side and system-side connectors
A ringer does not work	Check ringer activation on the telephone set. Check night mode activation	Reactivate ringer, code 89 R. Disable night service, code 900 R
(Incoming and outgoing) outside calls cannot be placed	Check for network dialling tone	No tone is heard, check system connection with the public network. The tone is heard, check that the device is not in tone dialling mode on a pulse line. Set device to pulse dialling mode.
The line is cut-off after dialling start	Check if dial barring is enabled on the extension	Disable dialling lockout (see chapter Programming terminals)
An error (fast busy) tone is heard after calling a terminal	Check if two internal calls are simultaneously in progress	Since the system allows two internal and one door phone simultaneous conversations, wait and try again after a few seconds
A fast busy tone is heard when lifting the handset		Check if two other extensions have off-hooked and are dialling, or one is communicating with the door phone. If so wait and try again after a few seconds
The R key does not work properly	The calibrated opening supplied by the device is not detected	Change calibrated opening detection duration (see chapter "System Programming", item 4 "Calibrated opening duration recognition change", code 98 d)

To restore default passwords, proceed as follows:

- Switch the system off. Disconnect outside lines wires.
- Remove system cover.
- Change S1 jumper to position 1-2
- Restart the system and dial 98 from terminal 41.
- Hang up and switch the system off.
- Restore S1 jumper to position 2-3.
- Replace the cover, restart the system.
- The system has restored default values for both passwords

LINKCOM 2800 CLIP QUICK REFERENCE LIST

FUNCTION	When off-hooked	When connected
INTERNAL CALLS		
Extensions 41…48	**41…48**	**-**
Paging	**40**	**-**
Door phone call	**6**	**-**
OUTSIDE CALLS		
Outside line 1 or 2	**0**	**-**
Private line 1 or 2	**20**	**-**
Outside line 1	**21**	**-**
Outside line 2	**22**	**-**
Speed-dialing numbers	**300…339**	**-**
Calibrated opening transmission	**-**	**R** then **#**
RECALL AND TRANSFER		
On-hold	**-**	**R** or **2 (*)**
Connection restore	**-**	**R** or **72 (*)**
Telephone recall (after on-hold status)	**-**	**41…48**
Tone or line restore	**-**	**R**
Transfer to free extension or during conversation	**-**	**Hang-up**
Reply to second call	**-**	**R** then **5**
Previous conversation resumption	**-**	**R** then **72**
SERVICES		
Room monitor	**49**	**-**
Booking	**-**	**9** when busy
Inclusion (if programmed)	**-**	**8** when busy
Telephone call pick-up	**5**	**R** then **5**
Call capture	**71**	**-**
Forward disabling	**24 d R**	**-**
Forward to outside	**23 nn R**	**-**
Shortcut numbers "nn" (on private line)		
Transfer status check	**240 R**	**-**
Transfer disabling	**88 R**	**-**
Door-lock release control	**1 R**	**1 R (**)**
Gate-lock release control (if programmed)	**2 R**	**2 R (**)**
Remote controlled relay activation	**971 R**	**-**
Disabling	**970 R**	**-**

EXTENSION CUSTOMIZATION		
Ringer disabling (for *day mode* outside or door phone calls)	**80 R**	**-**
Line 1 ringer restore	**81 R**	**-**
Line 2 ringer restore	**82 R**	**-**
Line 1 and 2 ringer restore	**83 R**	**-**
Door phone ringer restore	**84 R**	**-**
Ringer enabling (for *day mode* outside or door phone calls)	**89 R**	**-**
Hot Line activation	**85 R**	**-**
Disabling	**86 R**	**-**
SYSTEM CUSTOMIZATION		
Language (from terminal 41)		
Flemish	**981234840 R**	**-**
French	**981234841 R**	**-**
Night mode activation	**901 R**	**-**
Disabling	**900 R**	**-**
Direct Selection activation	**911 R**	**-**
Disabling	**910 R**	**-**
Message Stored in the Answering Machine notification activation	**921 R**	**-**
Disabling	**920 R**	**-**
Call Forwarding to Shortcut Number 30 (on private line)	**961 R**	**-**
Disabling	**960 R**	**-**
Reset of all system customizations	**99 R**	**-**

(*) = the digit is used only for pulse dial mode devices without the R key
(**) = R only on tone dial mode devices

1. To the network
2. Power supply adapter
3. To LINKCOM 2800 CLIP

4. Up
5. Down

WALL FIXING TEMPLATE

LINKCOM 2800 CLIP PROGRAMMING TABLE

VERSION	Dated	L2		PASSWORD	

LANGUAGE		GATE-LOCK REL. T		FLASH IN		OUT	PRINT TYPE OUT	

(S) DIAL CODES BARRING	0	1	2	3	4	5	6	7	8	9

	LINE 1	LINE 2
DTMF		
FAX SW/DISA		
ANSWERING		
INCOMING ONLY		
PRIVATE		
NO SHORTCUT NRS.		
CENTRAL TRANSFER		

SERV. ENABLE		OTHER	
4-NOTES MUSIC		ENCAPSULATING	
FAX SW/DISA		REM CONTR. RELAY	
PRE DISA		DOOR PHONE RIG	
ANSW. MACH. MESS.		LONG RING	
NIGHT MODE		PULSE 67/33	
NO DISA MESSAGE			
ANSW. MESSAGE			

ACTIVATIONS		41	42	43	44	45	46	47	48
ENABLED	L 1								
ENABLED	L 2								
PARTIALLY ENABLED	L 1								
PARTIALLY ENABLED	L 2								
NIGHT SERVICE	L 1								
NIGHT SERVICE	L 2								
DIRECT EXIT	L 1								
DIRECT EXIT	L 2								
RINGER	L 1								
RINGER	L 2								
DOOR PHONE RING.									
BARRING									
00 BARRING									
INCLUSION ENABL.									
HOT LINE									
LONG FLASH									
SHORT FLASH									
TRANSFER									
FAX									
ANSW. MACHINE									
NO NOTICE									
CLI: EXT PRES/SEND		/	/	/	/	/	/	/	/
PRINT. PRIVACY									

PHONEBOOK

SHORTCUT CODE	NUMBER	SHORTCUT CODE	NUMBER
300		320	
301		321	
302		322	
303		323	
304		324	
305		325	
306		326	
307		327	
308		328	
309		329	
310		330	
311		331	
312		332	
313		333	
314		334	
315		335	
316		336	
317		337	
318		338	
319		339	